DUAL HOMING FOR DWDM NETWORKS IN FIBER RINGS

Abstract of the Disclosure

First and second optical fibers (26 eastbound, 26 westbound) carry information modulated on an optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$). Information modulated on the carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) is to be recovered and transmitted at a first node (30) along the first and second optical fibers (26). The first node (30) includes apparatus for receiving and transmitting the information. The apparatus for receiving and transmitting the information includes a first receiver (either 80-λ1-1, 80-λ2-1, . . . 80-λN-1 or 80-λ1-2, 80-λ2-2, . . . 80-λN-2) for demodulating the information modulated on the optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) and carried on the first optical fiber (either 26 eastbound or 26 westbound), a second receiver (either 80-λ1-1, 80-λ2-1, . . . 80-λN-1 or 80-λ1-2, 80-λ2-2, . . . 80-λN-2) for demodulating the information modulated on the optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) and carried on the second optical fiber (either 26 eastbound or 26 westbound), a transmitter (78-λ1, 78-λ2, . . . 78-λN) for modulating the information on the second optical fiber (either 26 eastbound or 26 westbound), and a splitter (40) for splitting the optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) carried on the first optical fiber (either 26 eastbound or 26 westbound). The splitter (40) is coupled to the first optical fiber (either 26 eastbound or 26 westbound) and the first receiver (either 80-λ1-1, 80-λ2-1, . . . 80-λN-1 or 80-λ1-2, 80-λ2-2, . . . 80-λN-2). A portion of the optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) is coupled to the first receiver (either 80-λ1-1, 80-λ2-1, . . . 80-λN-1 or 80-λ1-2, 80-λ2-2, . . . 80-λN-2) and another portion of the optical carrier ($\lambda 1, \lambda 2, \ldots \lambda N$) continues on the first optical fiber (either 26 eastbound or 26 westbound).